

REMARKS/ARGUMENTS

Reconsideration of this application in light of the above amendments and following comments is courteously solicited.

The examiner in his final rejection dated March 3, 2006 objected to claims 1, 3, 6 and 19. Applicants have amended claims 1, 3, 6 and 19 in the instant amendment so as to overcome the examiner's objections. It is submitted that all of the claims as currently pending now comply with the formal requirements of 35 U.S.C. 112, second paragraph.

The examiner has rejected claims 1-19 under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. Applicants respectfully traverse the examiner's rejection for the reasons set forth hereinbelow.

The examiner has objected to the claim limitation "wherein the electron-flow through the quantum dot layer is blocked by the quantum dots formed in the quantum dot layer". In the examiner's opinion, there does not appear to be sufficient written description in the specification as originally filed to support the quoted claim language. Applicants respectfully traverse the examiner's position.

According to the application as originally filed, there is no explicit expression as the aforesaid claim limitation; however, one can find an implicit expression of the claimed limitation. In this regard the examiner's attention is drawn specifically to the paragraph bridging Pages 20 and 21 of the instant specification. Particular attention is drawn to lines 19-23 on Page 20 of the specification. This portion of the specification sets forth the phenomenon which results from the claim limitation. In other words, the probability of refilling the quantum dot layer is not so high because the electron-flow through the quantum dot layer is blocked by the quantum dots formed in the quantum dot layer and then one photon absorption

makes many electrons flow in the channel. It is submitted that this portion of the specification forms adequate support for the claimed language. In light of the foregoing, it is submitted that the examiner's rejection of the claims under 35 U.S.C. 112, first paragraph is improper and should be withdrawn. The specification as originally filed implicitly supports the claim limitation now presented in the claims and referred to by the examiner in his final rejection. In light of the foregoing, it is submitted that all of the claims as pending comply with the formal requirements of 35 U.S.C. 112, both first and second paragraphs.

As there is no prior art rejection, it is submitted that the instant application is now in condition for allowance and an early indication of same is respectfully requested.


An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims as amended herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

If any fees are required in connection with this case, it is respectfully requested that they be charged to Deposit Account No. 02-0184.

Respectfully submitted,
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By


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I, Rachel Piscitelli, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on June 5, 2006.

